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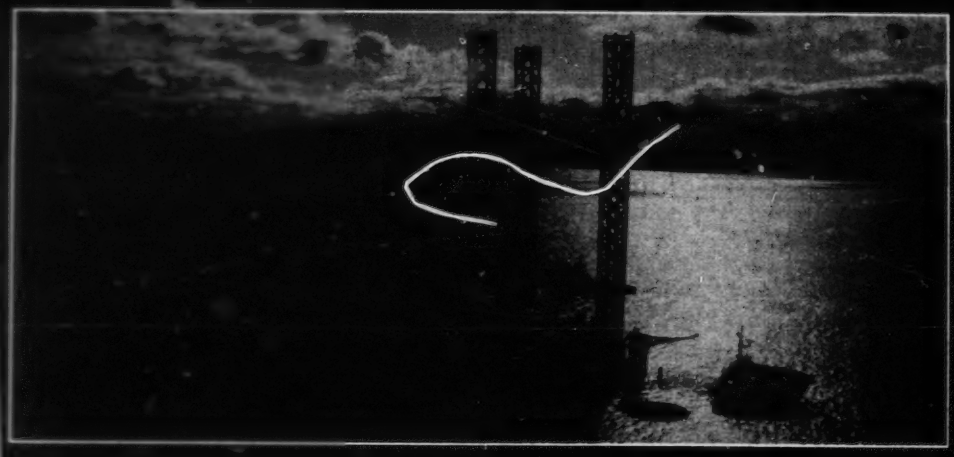

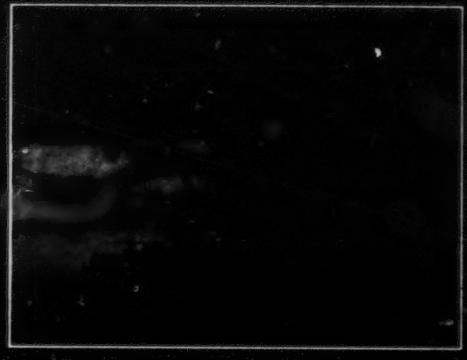

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U.S. Completions Top 81,000 In 1984

Despite a late-December slump that continued into mid-January, U.S. drillers finished 1984 with a year-long average of 2,428 active rigs. Except for the boom years of 1980, 81, and 82, you have to go way back to 1957 to find a year with a higher average rig count.

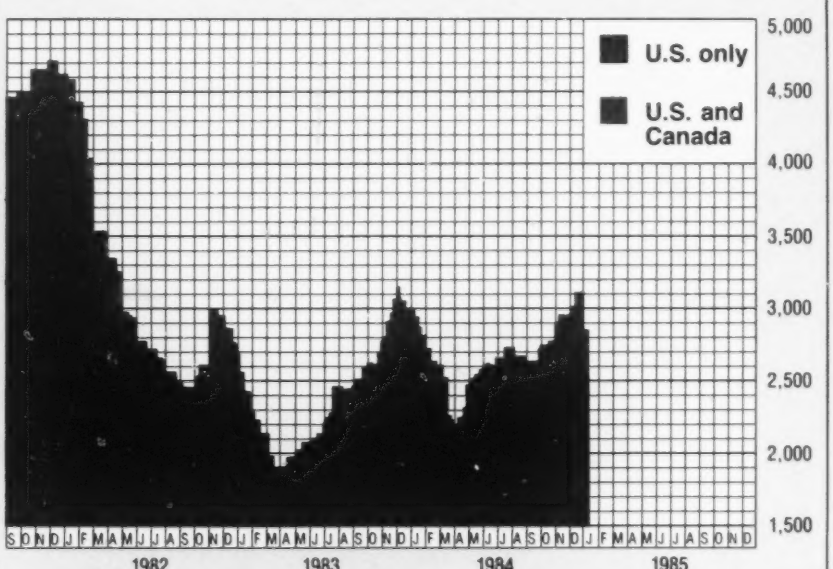
Completions also were close to record levels during 1984. Petroleum Information Corp. reports that 81,665 wells were drilled in the U.S. last year, which puts 1984 into second place – behind only 1982, when 84,693 wells were reported completed.

PI says that 66,577 of 1984's completions were development wells. This includes 40,225 oil wells and 11,778 gas wells. Compared with 1983, development completions were up 3.2%. Of all 1984 wells, 42,602 reportedly were oil completions (up 4.3%), and gas completions numbered 13,385 (down 6.7%).

Rotary rigs actually making hole in United States & Canada

As reported to International Association of Drilling Contractors by Hughes Tool Co.

	Dec. 17, 1984	Dec. 26, 1984	Jan. 2, 1985	Jan. 7, 1985
Alabama				
Land	15	14	9	9
Inland Waters	1	1	1	1
Offshore	4	4	4	4
Total	20	19	14	14
Alaska				
Land	11	14	13	12
Offshore	9	9	9	9
Total	20	23	22	21
Arkansas	33	30	28	28
California				
Land	108	114	111	107
Offshore	19	19	18	19
Total	127	133	129	126
Colorado	61	64	61	59
Florida	3	4	4	4
Hawaii	1	1	1	1
Idaho	2	2	2	2
Illinois	43	38	35	24
Indiana	3	4	7	7
Kansas	140	128	123	117
Kentucky	7	6	6	4
North Louisiana	35	37	35	36
South Louisiana				
Inland Waters	59	57	57	51
Land	122	118	107	108
Offshore	146	145	148	154
Total	362	357	347	354
Michigan	43	44	42	41
Mississippi	48	38	42	38
Montana	41	37	31	33
Nebraska	12	11	10	9
Nevada	6	8	11	10
New Mexico	83	77	83	84
New York	13	13	13	13
North Dakota	60	56	48	50
Ohio	73	56	55	70
Oklahoma	352	309	303	299
Oregon	2	2	2	2
Pennsylvania	47	46	46	40
South Dakota	6	6	5	6
Texas				
Offshore	62	61	64	63
Inland Waters	1	2	4	3
Dist. 1-S. Central Tex.	17	22	14	12
Dist. 2-Middle Tex.	42	51	54	53
Dist. 3-Upper Tex.	108	104	102	104
Dist. 4-Lower Tex.	96	101	102	102
Dist. 5-Northeast Tex.	30	25	24	20
Dist. 6-Far Northeast Tex.	77	73	62	64
Dist. 7B-N. Central Tex.	56	49	48	53
Dist. 7C-W. Central Tex.	75	71	73	71
Dist. 8-Far West Tex.	174	169	155	150
Dist. 8A-West Tex.	79	70	76	74
Dist. 9-N. Tex.	76	62	59	63
Dist. 10-Tex. Panhandle	60	57	53	56
Total	953	917	890	888
Utah	51	45	46	48
Virginia	0	0	1	0
W. Virginia	47	42	33	37
Wyoming	137	137	137	127
Total U.S.	2,[illegible]	[illegible]50	2,576	2,556
Canada	[illegible]	353	296	296
Canada – Offshore	1	8	8	11
U.S. and Canada	3,148	[illegible]1	2,879	2,863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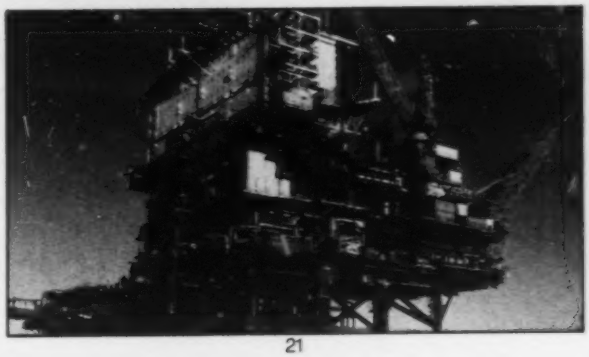

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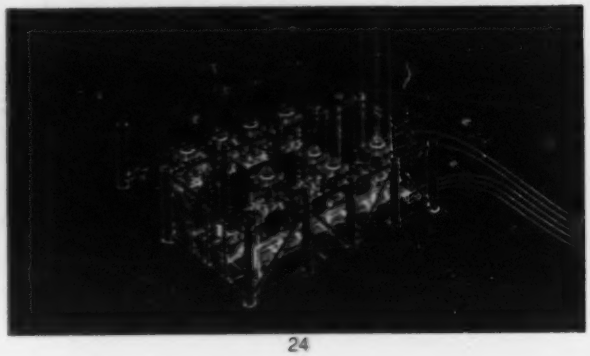

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Beryl B Beats Schedule And Budget 21
by W. B. Bleakley, Editor. Budget goals were more than met through careful and detailed engineering design of all components before contracts were awarded. There was also budgetary assistance from favorable currency exchange trends.

Texaco's Highlander Field Developed Subsea 24
by W. B. Bleakley, Editor. Development of the technology needed to make the field an economic success could lead the way to exploitation of more than 90 additional marginal fields that are known to exist within about 15 miles of existing platforms.

Sonat Challenges Offshore Drilling Frontiers 34
In an exclusive interview, Sonat President William C. O'Malley says that the Gulf of Mexico and the North Sea are the best deepwater drilling markets right now, but other potentially active areas include the Canadian east coast, Alaska, and China.

Model Evaluates Hydraulic Fractures, Determines Reservoir Limit 36
by William Hurst, Houston, Tex. Conformal mapping, an approach considered controversial by many of today's reservoir analysts, is the only approach that will overcome shortcomings and inaccuracies inherent in the finite-difference formulas.

Modern Production Risers, Part 15 44
by George W. Morgan, Engineering Consultant. A test approach seeks to eliminate the correlation problem relating to modeling of wave kinematics and concentrate on verifying the computer program's ability to predict deflections and stresses.

Dry And Wet Systems Operating At Landmark Projects 52
by Derrick Booth, Subsea Data Services. Cormorant's success can be attributed to the resources and determination of the partners and to the qualifying and testing of each component. The Garoupa project has vindicated dry, 1-atm designs.

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ABOUT THE COVER: New generations of offshore rigs are meeting challenges posed by frontier areas. Top and right-hand photos courtesy of Keydril Co. Lower left photo courtesy of Griffin-Alexander Drilling Co.

NEXT MONTH: The annual Deep Well Report in March will be an update on all wells drilled to 15,000 ft or deeper in the U.S. during 1984.

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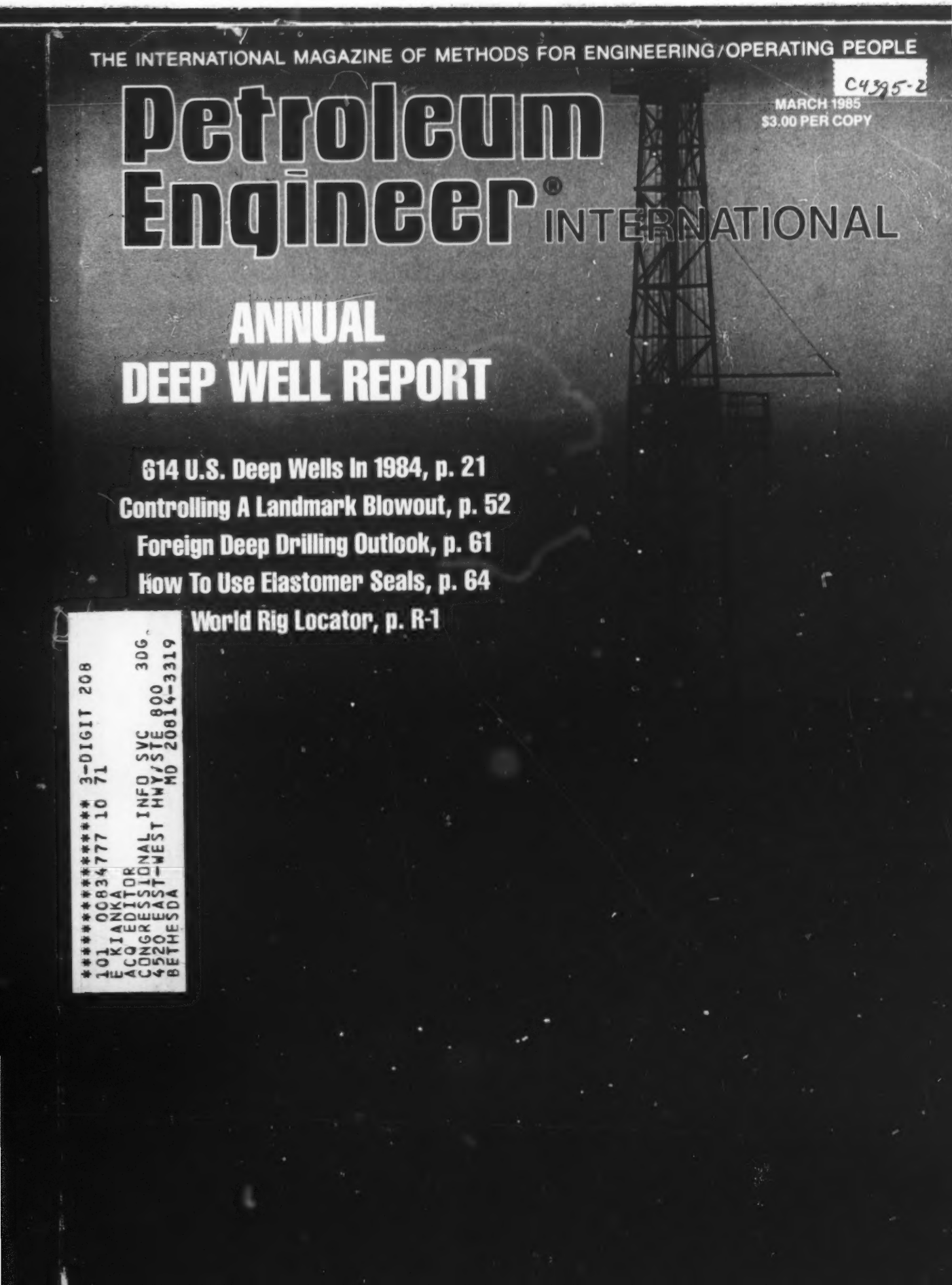

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Foreign Deep Drilling Outlook, p. 61
How To Use Elastomer Seals, p. 64
World Rig Locator, p. R-1

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Seasonal Drilling Decline Is Steeper Than Normal

The four weeks covered by this report saw 195 rigs disappear from the Hughes rig count as U.S. rotary rig activity continued its steeper-than-normal seasonal decline during January and March.

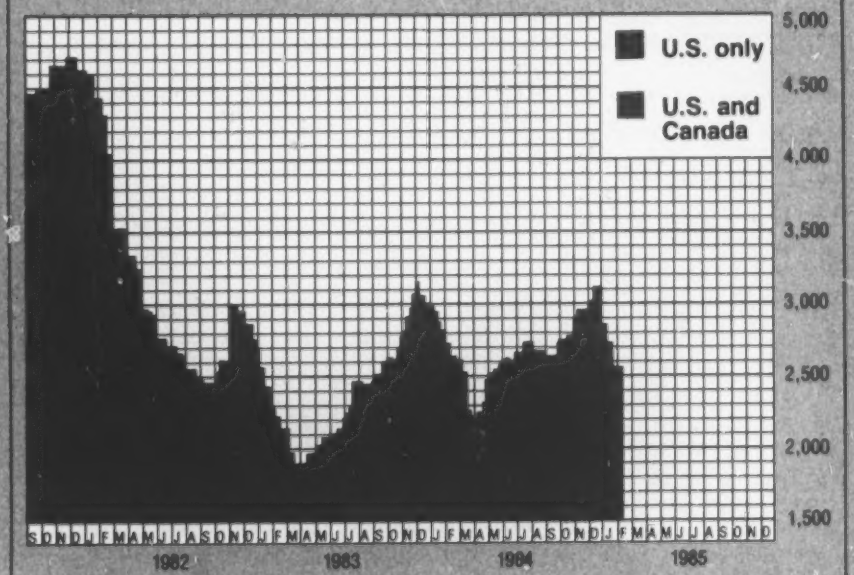
Most observers trace the severity of the decline to uncertainty over crude oil prices and worries about possible enactment of a flat rate tax that could dry up funding of drilling programs from financial sources outside the industry. And, with little likelihood of these question marks disappearing any time soon, chances are the drilling decline will continue into the second quarter of 1985.

Canadian drillers, on the other hand, continue to respond to the improved drilling climate installed by that country's new Conservative government.

Rotary rigs actually making hole in United States & Canada

As reported to International Association of Drilling Contractors by Hughes Tool Co.

	Jan. 11, 1985	Jan. 18, 1985	Feb. 4, 1985	Feb. 11, 1985
Alabama				
Land	8	12	13	11
Inland Waters	2	1	1	1
Offshore	4	5	5	5
Total	14	18	19	17
Alaska				
Land	15	16	18	18
Offshore	8	6	7	7
Total	23	24	25	25
Arkansas	30	32	35	31
California				
Land	73	79	77	83
Offshore	19	19	19	18
Total	97	98	96	101
Colorado	55	55	52	52
Florida				
Land	3	3	4	4
Offshore	0	0	1	1
Total	3	3	5	5
Hawaii	1	1	1	1
Idaho	2	2	2	2
Illinois	24	28	27	24
Indiana	7	7	6	6
Kansas	109	105	107	95
Kentucky	5	5	5	5
North Louisiana	43	39	35	32
South Louisiana				
Inland Waters	53	52	49	50
Land	105	105	109	101
Offshore	146	147	147	146
Total	347	343	340	329
Michigan	35	30	34	35
Mississippi	29	35	35	33
Montana	25	25	18	20
Nebraska	11	12	8	8
Nevada	6	5	5	5
New Mexico	67	60	57	49
New York	11	7	7	8
North Dakota	43	37	34	28
Ohio	55	57	52	54
Oklahoma	284	287	261	251
Oregon	2	2	2	1
Pennsylvania	39	41	41	44
South Dakota	6	7	5	5
Texas				
Offshore	60	56	52	50
Inland Waters	5	5	4	6
Dist. 1-S. Central Tex.	16	14	16	11
Dist. 2-Middle Tex.	43	38	38	41
Dist. 3-Upper Tex.	86	79	84	90
Dist. 4-Lower Tex.	87	85	84	75
Dist. 5-Northeast Tex.	28	24	21	26
Dist. 6-Far Northeast Tex.	66	67	61	48
Dist. 7B-N. Central Tex.	53	49	51	44
Dist. 7C-W. Central Tex.	57	57	53	51
Dist. 8-Far West Tex.	142	140	144	120
Dist. 8A-West Tex.	65	74	76	75
Dist. 9-N. Tex.	60	61	54	43
Dist. 10-Tex. Panhandle	49	46	42	36
Total	816	799	790	764
Utah	47	36	42	41
W. Virginia	32	33	29	24
Wyoming	122	112	99	91
Total U.S.	2,570	2,508	2,371	2,175
Canada	264	265	262	260
Canada - Offshore	12	11	10	11
U.S. and Canada	2,746	2,670	2,643	2,576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